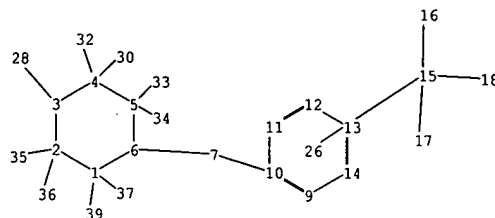
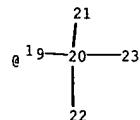
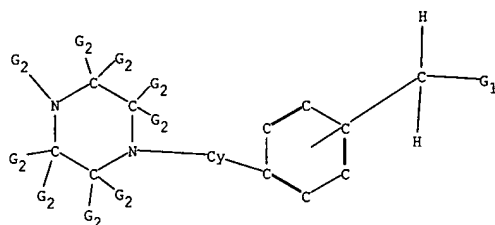
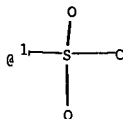


## EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L5	2571	((544/362) or (544/370) or (544/372) or (544/373)).CCLS.	US-PGPUB; USPAT	OR	OFF	2006/03/06 14:39
L6	143	biphenyl-4-ylmethyl	US-PGPUB; USPAT	OR	OFF	2006/03/06 14:41
L7	5	I5 and I6	US-PGPUB; USPAT	OR	OFF	2006/03/06 14:41
L8	908	(544/364).CCLS.	US-PGPUB; USPAT	OR	OFF	2006/03/06 14:42
L9	441	pyridinyl near3 benzyl	US-PGPUB; USPAT	OR	OFF	2006/03/06 14:42
L10	2238	pyridyl near3 benzyl	US-PGPUB; USPAT	OR	OFF	2006/03/06 14:43
L11	45	I8 and (I9 or I10)	US-PGPUB; USPAT	OR	OFF	2006/03/06 14:43

Part 2



chain nodes :

7 15 16 17 18 19 20 21 22 28 30 32 33 34 35 36 37 39

ring nodes :

1 2 3 4 5 6 9 10 11 12 13 14

ring/chain nodes :

23

chain bonds :

1-37 1-39 2-35 2-36 3-28 4-30 4-32 5-33 5-34 6-7 7-10 15-16 15-17 15-18  
19-20 20-21 20-22 20-23

ring bonds :

1-2 1-6 2-3 3-4 4-5 5-6 9-10 9-14 10-11 11-12 12-13 13-14

exact/norm bonds :

1-2 1-6 1-37 1-39 2-3 2-35 2-36 3-4 3-28 4-5 4-30 4-32 5-6 5-33 5-34 6-7  
7-10 15-18 19-20 20-21 20-22 20-23

exact bonds :

15-16 15-17

normalized bonds :

9-10 9-14 10-11 11-12 12-13 13-14

isolated ring systems :

containing 1 : 9 :

G1:OH,X,[\*1]

G2:C,H

Match level :

1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 9:Atom 10:Atom 11:Atom 12:Atom  
13:Atom 14:Atom 15:CLASS 16:CLASS 17:CLASS 18:CLASS 19:CLASS 20:CLASS 21:CLASS  
22:CLASS 23:CLASS 26:CLASS 28:CLASS 30:CLASS 32:CLASS 33:CLASS 34:CLASS 35:CLASS  
36:CLASS 37:CLASS 39:CLASS

Generic attributes :

7:  
Saturation : Unsaturated  
Number of Carbon Atoms : less than 7  
Type of Ring System : Monocyclic

Element Count :  
Node 7: Limited  
N,N1-2  
O,O0  
S,S0

10/766741

=> s l1

SAMPLE SEARCH INITIATED 13:15:29 FILE 'REGISTRY'  
SAMPLE SCREEN SEARCH COMPLETED - 40528 TO ITERATE

4.9% PROCESSED 2000 ITERATIONS 0 ANSWERS  
INCOMPLETE SEARCH (SYSTEM LIMIT EXCEEDED)  
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE \*\*COMPLETE\*\*  
BATCH \*\*COMPLETE\*\*  
PROJECTED ITERATIONS: 798539 TO 822581  
PROJECTED ANSWERS: 0 TO 0

L2 0 SEA SSS SAM L1

=> s l1 sss full

FULL SEARCH INITIATED 13:16:00 FILE 'REGISTRY'  
FULL SCREEN SEARCH COMPLETED - 808395 TO ITERATE

100.0% PROCESSED 808395 ITERATIONS 3 ANSWERS  
SEARCH TIME: 00.00.10

L3 3 SEA SSS FUL L1

=> file caplus

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	167.38	167.59

FILE 'CAPLUS' ENTERED AT 13:16:15 ON 06 MAR 2006  
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.  
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.  
COPYRIGHT (C) 2006 AMERICAN CHEMICAL SOCIETY (ACS)

Copyright of the articles to which records in this database refer is held by the publishers listed in the PUBLISHER (PB) field (available for records published or updated in Chemical Abstracts after December 26, 1996), unless otherwise indicated in the original publications. The CA Lexicon is the copyrighted intellectual property of the American Chemical Society and is provided to assist you in searching databases on STN. Any dissemination, distribution, copying, or storing of this information, without the prior written consent of CAS, is strictly prohibited.

FILE COVERS 1907 - 6 Mar 2006 VOL 144 ISS 11  
FILE LAST UPDATED: 5 Mar 2006 (20060305/ED)

Effective October 17, 2005, revised CAS Information Use Policies apply. They are available for your review at:

<http://www.cas.org/infopolicy.html>

=> s l3

L4 2 L3

=> d l4 1-2 bib abs hitstr

L4 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2006 ACS on STN  
AN 2005:564657 CAPLUS

10/766741

DN 143:97383

TI Preparation of pyrazines as protein kinase, especially pUL-97 kinase, inhibitors for treatment of infectious diseases, particularly human cytomegaloviral infections

IN Eikhoff, Jan Eike; Ashton, Mark Richard; Courtney, Stephen Martin; Yarnold, Christopher John; Varrone, Maurizio; Loke, Pui Leng; Herget, Thomas; Schwab, Wilfried; Hafenbradl, Doris

PA Axxima Pharmaceuticals A.-G., Germany

SO PCT Int. Appl., 139 pp.

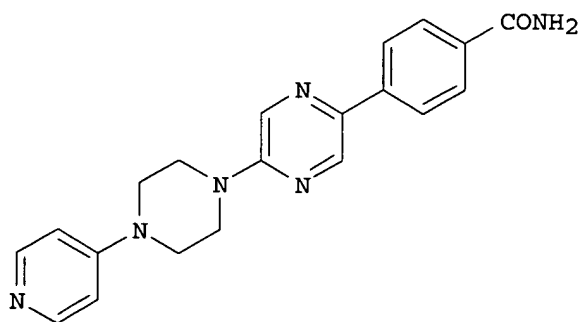
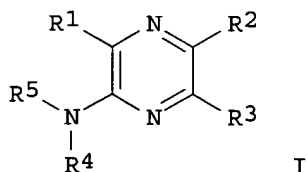
CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2005058876	A1	20050630	WO 2004-EP14371	20041216
	W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
	RW:	BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
PRAI	EP 2003-29038	A	20031216		
	US 2003-530612P	P	20031219		
OS	MARPAT 143:97383				
GI					



AB The invention is related to the prepn. of title compds. I, and/or

stereoisomeric forms, prodrugs, and/or pharmaceutically acceptable salts [wherein R1, R2 = independently H, F, Cl, BR, OH, (un)substituted alk(en/yn)yl, etc.; R3 = (un)substituted cycloalkyl, hetero/aryl, heterocyclyl; R4 = H, alkyl; R5 = H, (un)substituted alkyl, hetero/aryl, heterocyclyl, etc.; R4NR5 = (un)substituted mononitrogen or dinitrogen ring] as protein kinase inhibitors for use in the prophylaxis and/or treatment of infectious diseases, including opportunistic diseases, prion diseases, immunol. diseases, autoimmune diseases, bipolar and clin. disorders, cardiovascular diseases, cell proliferative diseases, diabetes, inflammation, transplant rejections, erectile dysfunction, neurodegenerative diseases and stroke and esp. for the treatment of herpesviral induced infections, including opportunistic infections and infections and diseases caused by human cytomegalovirus (HCMV). For example, II was prepd. by monoacylation of 2,6-dichloropyrazine with 1-(4-pyridinyl)piperazine and coupling of the chloride with (4-aminocarbonylphenyl)boronic acid. I have an inhibitory effect on the protein kinase activity of various protein kinases, such as pUL-97, EGFR, , etc. I were potent inhibitors of HCMV replication in cell cultures; I showed inhibition of HCMV replication in HFF cells (IC50 < 3 .mu.M). I did not show any or low toxicity up to concns. of 10 .mu.M in HFF cells.

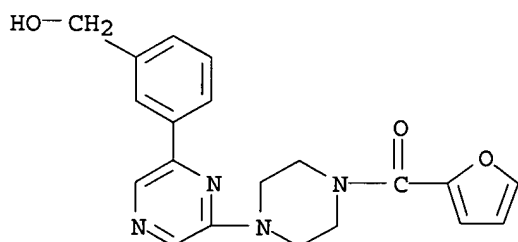
IT 856002-34-1P, (Furan-2-yl) [6'-(3-hydroxymethylphenyl)-2,3,5,6-tetrahydro-[1,2']bipyrazinyl-4-yl]methanone 856002-39-6P, 1-[3-[4-[2-(Pyrrolidin-1-yl)ethyl]-2,3,5,6-tetrahydro-[1,2']bipyrazinyl-6'-yl]phenyl]methanol

RL: ADV (Adverse effect, including toxicity); PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(drug candidate; prepn. of pyrazines as protein kinase, esp. pUL-97 kinase, inhibitors for treatment of infectious diseases, particularly human cytomegaloviral infections)

RN 856002-34-1 CAPLUS

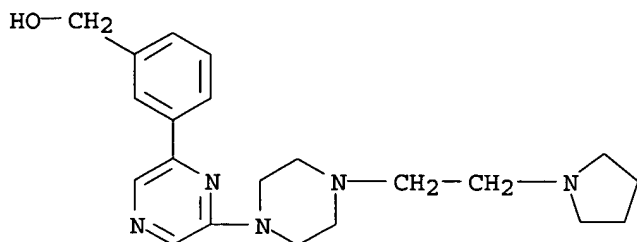
CN Piperazine, 1-(2-furanylcarbonyl)-4-[6-[3-(hydroxymethyl)phenyl]pyrazinyl]- (9CI) (CA INDEX NAME)



RN 856002-39-6 CAPLUS

CN Benzenemethanol, 3-[6-[4-[2-(1-pyrrolidinyl)ethyl]-1-piperazinyl]pyrazinyl]- (9CI) (CA INDEX NAME)

10/766741



RE.CNT 13      THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4    ANSWER 2 OF 2    CAPLUS    COPYRIGHT 2006 ACS on STN  
AN    2005:116083    CAPLUS  
DN    142:198092  
TI    A preparation of 2-aminopyrimidine derivatives, useful as histamine H4  
      receptor antagonists  
IN    Sato, Hiroki; Fukushima, Keiko; Shimazaki, Makoto; Urbahns, Klaus; Sakai,  
      Katsuya; Gantner, Florian; Bacon, Kevin  
PA    Bayer Healthcare AG, Germany  
SO    Eur. Pat. Appl., 38 pp.  
      CODEN: EPXXDW  
DT    Patent  
LA    English  
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 1505064	A1	20050209	EP 2003-17810	20030805
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
	WO 2005014556	A1	20050217	WO 2004-EP8225	20040723
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
PRAI	EP 2003-17810	A	20030805		
OS	CASREACT 142:198092; MARPAT 142:198092				
GI					

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

AB    The invention relates to a prepn. of novel 2-aminopyrimidine derivs. of formula I [wherein: R1 is pyrrolidine or piperazine deriv. attached to the pyrimidine ring via nitrogen atom; R2 is Ph or naphthyl deriv.], useful as histamine H4 receptor antagonists. The 2-aminopyrimidine derivs. of the present invention are useful for treatment and prophylaxis of diseases such as asthma, rhinitis, allergic diseases, chronic obstructed pulmonary

10/766741

disease (CORD), atherosclerosis, and rheumatoid arthritis. For instance, 2-aminopyrimidine deriv. II.bul.3HCl was prepd. via amination of 2-amino-4,6-dichloropyrimidine by aminopyrrolidine deriv. III, phenylation of the obtained amino(aminopyrrolidinyl)pyrimidine deriv. by PhB(OH)<sub>2</sub>, and subsequent N-cleavage (yields: amination - 66%, phenylation - 89%). For instance, IC<sub>50</sub> for the invention compd. IV.bul.3HCl was < 20 nM.

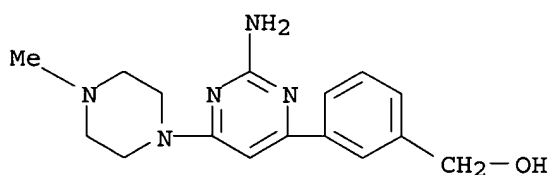
IT 838872-00-7P

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(prepn. of 2-aminopyrimidine derivs. useful as histamine H<sub>4</sub> receptor antagonists)

RN 838872-00-7 CAPLUS

CN Benzenemethanol, 3-[2-amino-6-(4-methyl-1-piperazinyl)-4-pyrimidinyl]-  
(9CI) (CA INDEX NAME)



RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> file caold

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	11.14	178.73
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	-1.50	-1.50

FILE 'CAOLD' ENTERED AT 13:17:25 ON 06 MAR 2006

USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.

PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

COPYRIGHT (C) 2006 AMERICAN CHEMICAL SOCIETY (ACS)

FILE COVERS 1907-1966

FILE LAST UPDATED: 01 May 1997 (19970501/UP)

This file contains CAS Registry Numbers for easy and accurate substance identification. Title keywords, authors, patent assignees, and patent information, e.g., patent numbers, are now searchable from 1907-1966. TIFF images of CA abstracts printed between 1907-1966 are available in the PAGE display formats.

New CAS Information Use Policies, enter HELP USAGETERMS for details.

This file supports REGISTRY for direct browsing and searching of all substance data from the REGISTRY file. Enter HELP FIRST for more information.

=> s 13



10/766741

L5                    0 L3

=> log h

COST IN U.S. DOLLARS

SINCE FILE	TOTAL
ENTRY	SESSION
0.44	179.17

FULL ESTIMATED COST

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

SINCE FILE	TOTAL
ENTRY	SESSION
0.00	-1.50

CA SUBSCRIBER PRICE

SESSION WILL BE HELD FOR 60 MINUTES

STN INTERNATIONAL SESSION SUSPENDED AT 13:17:34 ON 06 MAR 2006